

## **Operating Tips For A K75 or 2 Valve K100**

### **IGNITION SWITCH:**

The ignition switch has three positions. I'll call them left, middle and right.

**Left:** Everything off.

**Middle:** Headlight's parking light and taillight on. The key can be removed from the ignition switch in the middle position so be sure to turn the key all of the way off before pulling the key out and walking away.

**Right:** This is the on position for starting and running the bike. The key cannot be removed in this position.

### **STARTING THE BIKE**

The bike must be in neutral (as indicated by a zero in the gear display in the tachometer face plate and the neutral light being illuminated) or the clutch lever must be pulled in. The red kill switch on the right hand combination switch must be pointing straight up. Push the green button on the right hand combination switch to engage the starter.

If you try to start a K bike with a low battery then there's a chance that the starter relay will only partially engage which creates a spark that can arc and weld the starter relay contacts together. If this happens then the starter will keep going (and going, and going...) even after you release the starter button. The quickest way to disconnect the battery in the event of this occurring is to disconnect the battery ground cable from the left side of the transmission. If you think this might happen then it's a good idea to check that bolt ahead of time as many times that bolt was last touched when the bike left the factory and some corrosion may have built up in the threads.

In general, K bikes don't need a lot of gas to get started. Before starting it, I've always found that a quick flip of the throttle and putting the choke lever to the first position will have the bike start right up. (It's a fuel injected engine so technically it's a throttle advance, not a real choke, but BMW labeled it a choke so that's what people call it.)

There's no need to let the engine warm up. BMW recommends just starting it up and riding off. It'll be a little cold-blooded for the first couple of miles so leave the choke on for the first few miles. On 1990 and earlier bikes, the yellow indicator light in the tach faceplate will be illuminated to remind you that the choke is on. For whatever reason, BMW stopped installing the switch for this in 91 and later bikes so if you've got one of the later bikes it's not broken, it's just not there. (It is possible to retrofit a switch to the throttle body assembly if you really care about the choke light. All the wiring is there in the main wiring harness and the instrument cluster.)

### **SHIFTING**

K bikes employ the typical one down, four up shift pattern common to most motorcycles. Some people think K bike transmissions are clunky. In my experience it really varies from bike to bike.

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One thing is for sure though, K bikes don't like timid shifts and will leave you in a "false neutral" if you don't shift assertively. This doesn't mean that you have to stomp on the shift lever, just pull in the clutch and shift with authority.

Some people subscribe to a "preload the shift lever" theory (put some pressure on the shift lever prior to pulling the clutch in) but I've owned quite a few of these bikes and have never found that to be necessary on any of them.

### **HANDLEBAR CONTROLS**

The throttle, front brake lever and clutch lever function pretty much as you'd expect them to. One thing that a 2-valve K bike might have installed is a throttle friction screw which can be used as a poor man's cruise control. It's located on the underside of the throttle perch, can usually be turned by hand and looks like this:



### **TURN SIGNALS**

The turn signals are the paddle type switches at the bottom of the left and right combination switches. If you're coming from another brand of bike then you might think it's goofy at first but it doesn't take that long to get used to it. The button with the "X" on it on the right combination switch cancels either turn signal. Push that button up with your right thumb to cancel either turn signal.

K bikes also have an automatic turn signal canceling function that turns off the turn signals after traveling approximately 210 meters. (You can disable this by cutting the blue/green wire at the flasher relay.)

### **HORN**

The horn switch is located on the bottom of the left hand combination switch. Push this button up with your left thumb to sound the horn.

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### **HEADLIGHT SWITCH**

The headlight switch is the big yellow three-position switch in the left combination switch. The middle position is the headlight low beam. The up position is the high beam. The down position is a momentary switch for the high beam.

(There's a square white one wire connector in the relay box under the gas tank. If it's connected then the low beam stays on with the high beam. If it's disconnected then the low beam goes off when the high beam is on.)

### **DASH SWITCHES**

#### **HAZARD SWITCH**

This is the switch with the red graphic insert with a triangle on it. Pushing it down turns on the four way emergency flashers. The hazards can only be turned on when the bike is turned on. However, they can be left on when the bike is turned off. (I suspect BMW designed it that way so that some idiot couldn't come by and turn your flashers on and run down your battery when you're away.)

(If your bike doesn't have a hazard switch then it's very easy to add one. All of the circuitry to have one is already on the bike. All you need to do is install a hazard switch in the dash and plug it into the wiring harness connector under the tank on the left side.)

#### **HEATED GRIP SWITCH** (If your bike is equipped with heated grips.)

The graphic on the heated grip switch is a grip with a coil of wire around it. It is a three-position switch. Pushing the top of it turns the heated grips on the high setting. Pushing the bottom of it turns the heated grips on the low setting. The middle position is off.

#### **ABS SWITCH** (If your bike has ABS.)

The graphic on this switch is the letters "ABS" bracketed by a couple of brake shoes on a red background. Hopefully you'll never need to use it. If your ABS is in fault mode then the ABS lights in your instrument cluster will keep flashing when you're riding. When this happens that means that your ABS is not operational and that you just have normal brakes. When this happens pressing the ABS switch will make those lights go solid for about ten minutes so it's not as bothersome as the flashing lights. The ABS warning lights will then start flashing again. Hit the ABS switch again to make them solid for another ten minutes. (How to deal with a faulted ABS system is addressed elsewhere.)

#### **BULB MONITOR UNIT** (a.k.a. "the triangle light")

In the center of the instrument cluster is a red indicator lamp with a triangle. This light is controlled by a relay of sorts known as the bulb monitor unit, or BMU. The BMU tests four things:

- 1) The front brake switch
- 2) The rear brake switch

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- 3) The taillight running light bulb
- 4) The brake light bulb

When you first start the bike this light will remain on until you have activated both the front and rear brake switches. If it remains solid after you've applied both brakes then either one of your switches is not working or the tail or brake light bulb is out. (On ABS equipped bikes, once the brakes have been applied, it will flash in conjunction with the ABS indicator at the bottom of the speedometer faceplate.)

If the BMU light comes on or starts to flicker while you're riding then either your tail or brake light is out or on it's way out. Note that sometimes you may still have a functioning brake/tail light but either the contacts are getting dirty or the bulb's filament isn't working well enough to make the BMU happy. Replacing the bulb with a new one should cure this.

### **TURN SIGNAL "HYPERFLASH"**

If one of your turn signals is flashing at twice it's normal rate then the flasher relay is telling you that one of your turn signal bulbs is out.

### **ABS EQUIPPED BIKES**

If your bike is equipped with ABS then the ABS warning lights will flash until you've ridden several feet. The reason for this is that the ABS control unit (a.k.a. ABS brain) tests all of the following components as part of it's initialization process: the front ABS sensor, the rear ABS sensor, the front ABS modulator, the rear ABS modulator and the brain itself. The front and rear ABS sensors cannot be tested until the bike starts moving and the sensors send pulses to the ABS brain.

If the ABS warning lights in the instrument cluster continue flashing after you've started riding then this tells you that the ABS is not operational. The bike is still safe and rideable though, you just have normal non-ABS braking. As mentioned above, pressing the ABS dash switch will make the lights go solid for the next ten minutes so they aren't as obnoxious as when they're flashing.

### **CLUTCH LEVER SIDESTAND RETRACTOR**

Two valve K bikes have a mechanical side stand retractor that retracts the side stand when the clutch lever is pulled in. It can be adjusted by turning the special nut on the rod down at the back of the transmission. (See #7 in the attached diagram below.) If tightening it all the way doesn't adjust it enough then I've found that putting a bent washer inside the special nut can help.

If you're going to be parking your bike in an area with a lot of doofi (plural of doofus) around like near a bar, college campus or high school then I'd recommend putting the bike on the center stand. What can happen is that some witless doofus will hop on your bike, stand it up and play with the controls. When they pull in the clutch they'll unknowingly retract the side stand and then when they get off your bike they will promptly drop it on the left side. When you get back to your bike it will have some nice damage on the left side and chances are they won't leave a note offering to pay for the damage they've caused.

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### **PUTTING THE BIKE ON THE CENTER STAND**

K bikes have a lifting handle along the left rear diagonal frame member. It folds up and out and aids in putting the bike on the center stand. Being rather heavy beasts it does take some effort and technique to get them up on the center stand. Here are some pointers on how to make it easier:

- 1) Put the bike in neutral. This allows the rear wheel to rotate freely and reduces the initial resistance to moving backwards.
- 2) Point the front wheel straight ahead.
- 3) Place your left hand on the left handlebar grip.
- 4) Pull out the center stand lifting handle with your right hand.
- 5) Push down on the center stand with the ball of your right foot until the left "foot" of the center stand hits the ground.
- 6) Slowly rotate the bike to an upright position until the right "foot" of the center stand also touches the ground.
- 7) Using mostly downward pressure on the center stand with your right foot, pull the bike back and up onto the center stand.

### **GAS CAP**

The gas cap opens by inserting the ignition key and turning the key about 90 degrees counterclockwise. When closing the gas cap it helps to give it a good rap with the butt of your hand to make sure that it latches completely.

### **SEAT/HELMET LOCK**

For "normal" K bikes: (86 and later non-low seat models) The seat/helmet lock is located about half way back of the seat on the left hand side. The lock has three positions. I'll call them left, up and right. When the lock is in the left position (all of the way counterclockwise) then the seat lock is unlocked and can be opened by pushing in on the lock. When the lock slot is vertical and pointed straight up the seat is locked. With the key inserted, the helmet lock is released by turning the key to the right (all of the way clockwise) and pushing in the lock. (As you'll soon discover the helmet lock is pretty darned worthless. It can be made somewhat useful if you use a helmet lock extender.)

Make sure that the seat lock latches when you close the seat. If you don't then the seat latch rod on the seat rides on top of the hook of the seat lock which will eventually wear it out and break it. The length of the seat latch rod can be adjusted by loosening the lock nut at its base.

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### **ALTITUDE PLUG**

The fuel injection control unit by Bosch is named L-Jetronic. It was designed in the early 80s and unlike most modern FI brains does not sense the ambient air pressure nor adjust the mixture for the reduced ambient air pressure found at higher altitudes. Instead K75s and K100s have what's commonly referred to as an altitude plug. When you go above 4,000 feet in altitude you insert the plug which tells the L-Jetronic to adjust the mixture.

The connector for the altitude plug can be found along the frame rail above the back of the throttle bodies. The picture below shows the connector with the factory black protective cap installed. Sometimes it's hidden behind the frame so you have to dig to find it.



The altitude plug is BMW part # 61 13 1 459 504. All it is is a loop of wire that shorts two leads. I usually wire it up to a dash switch because stopping to insert or remove a plug seems kind of dumb to me.

## **K BIKE ODDITIES**

### **SMOKING ON STARTUP**

Any K bike, if left on the side stand long enough, will generate a good amount of smoke when you start it. This is because when the bike is on the side stand the cylinder head is angled downward and oil seeps past the piston rings into the combustion chambers. Aside from the smoke that it generates it's really not an issue.

This is especially true for model year 1988 and earlier K bikes. The rings on the early bikes let more oil by and hence those bikes will generate a lot more smoke. There are a couple of ways to minimize smoky startups. The first is to use the center stand. That way the engine is level and much less oil, if any, seeps past the rings. The second method is to turn off the bike and tilt it to the right for about ten or fifteen seconds before putting it on the side stand. This allows most of the oil behind the pistons to drain back into the sump so there's less to seep past the rings into the combustion chambers.

### **BOUNCY K75S INSTRUMENT CLUSTER**

"They all do that."

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### **K75 BACKFIRING**

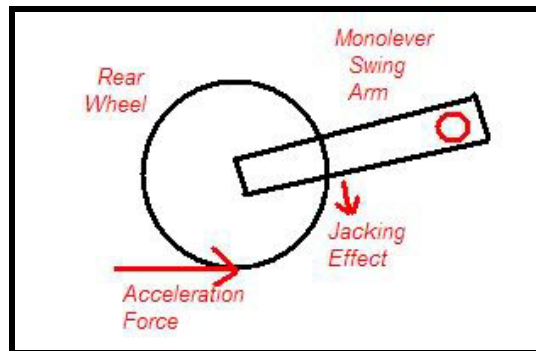
"They all do that." If you're used to using moderate to heavy engine braking to slow down then a K75 will overfuel a bit and backfire. At least for me, the more miles I put on my first K75 the less it backfired. The bike kind of subconsciously taught me not to engine brake to the point where it would backfire.

### **K BIKE WHINING**

It's normal. It's the fuel pump working inside the gas tank. As you get low on fuel it will tend to get louder as less of the fuel pump is submerged and the empty gas tank becomes a larger resonating chamber. Since the fuel also serves as a coolant for the fuel pump it's a good idea not to run your tank extremely low on a consistent basis. I usually refill when the low fuel idiot light in the instrument cluster illuminates.

### **"JACKING"**

Given the design of the monolever shaft drive, 2 valve K bikes also experience a phenomenon commonly referred to as jacking or the shaft effect. What the rider experiences when this occurs is feeling the rear end of the bike rising up or "being jacked" under heavy acceleration. This is inherent in the design and normal for 2 valve K bikes. It occurs due to the geometry of the monolever rear suspension setup. What happens is that the application of a significant amount of force at the rear tire's contact patch causes the monolever swing arm to rotate downwards slightly and raise the rear end of the bike. The crude diagram below might help you understand why this occurs.



The jacking effect is more noticeable on K100s than K75s since K100s have more torque/power.

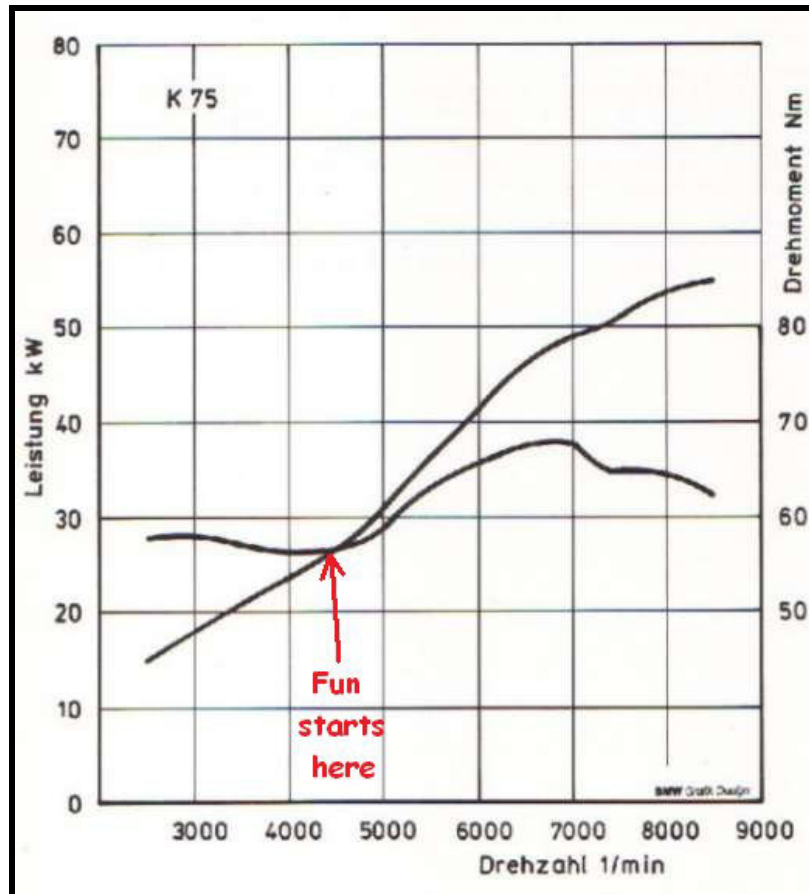
### **SPEEDOMETER ACCURACY**

K bike speedometers tend to run about 10% fast from the factory. You can calibrate the speedometer yourself though. Email me at [smithduck@gmail.com](mailto:smithduck@gmail.com) for details.

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### **GETTING THE MOST OUT OF YOUR K BIKE**

There are a number of people out there who consider the K75 to be a "slow" or "underpowered" motorcycle. Well, it is and it isn't. It certainly won't beat a Hayabusa off of the line but if you know how to take advantage of the K75's (or K100's for that matter) power curve then you can get a lot more oomph and fun out of it than a lot of people think. The key is to "wring the snot out of it" by keeping the engine above 4,000 RPM and riding it through turns in a gear or two lower than you "think" you should. This will give you a lot more torque for engine control entering and, more importantly, exiting turns.



Do not worry that you're abusing the engine. K bike engines are "bulletproof" and can literally run all day long at 7,000 rpm without skipping a beat. (I know. I've done it.) They don't even redline until about 8,500 RPM. It's not a Toyota Camry, don't ride it like one.

And don't be afraid to use third gear for passing.

**Ride it like you stole it... REALLY!**

(Insert disclaimers about riding within your skill level, taking it to the track and other such stuff here.)